UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/683,993	03/08/2002	Honary Hooman	42390P13490	2606

8791	7590	04/06/2005

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EXAMINER
TRUONG, CAMQUY

ART UNIT	PAPER NUMBER
2195	

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _08 March 2002_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-30_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-30_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _4/28/2003_.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-30 are presented for examination.

2.   It is noted that although the present application does contain line numbers in the specification and claims, the line numbers in the claims do not correspond to the preferred format. The preferred format is to number each line of every claim, with each claim beginning with line 1. For ease of reference by both the examiner and Applicant all future correspondence should include the recommended line numbering.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4.   Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. The claim language in the following claims is not clearly understood:

i. As to claim 1, it is not clearly understood what happen after the third queue have the task identifier and what is the third queue doing with the task identifier (i.e. the task identifier will be executed?).

ii. As to claims 3-4, line 2, it is not clearly indicated whether "priority types" refers to " the priority type first and second priority type " in claim 1; it is

not clearly understood what is meant by "data frame types" and how it relates

with "priority types".

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described
> as set forth in section 102 of this title, if the differences between the subject matter sought to
> be patented and the prior art are such that the subject matter as a whole would have been
> obvious at the time the invention was made to a person having ordinary skill in the art to which
> said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

6.   Claims 1-2, 6-12, 14, 17-20, 23-26 and 29-30 are rejected under 35

U.S.C. 103(a) as being unpatentable over Miro (U.S. Patent 5,220,653) in view of

Applicant Admitted Prior Art (AAPA).

7.   As to claims 1, 11, 19 and 24, Miro teaches the invention substantially as

claimed including a device comprising:

a task scheduler coupled to the port, the task scheduler to generate a task

identifier for every data frame received (col.13, lines 60-65);

a first queue coupled to the task scheduler to hold task identifiers of a first

priority type (col. 4, lines 50-60; col. 13, line 66 – col. 14, line 9);

a second queue couple to the task scheduler to hold task identifiers of a

second priority type, the second priority type different than the first priority type

(col. 4, lines 60-65; col. 13, line 66 – col. 14, line 9);

a switch coupled to the first and second queues, the switch configured to

retrieve task identifiers from the first queue and the second queue in a fair

manner (col. 3, lines 50-61; col. 7, lines 56-67; col. 14, lines 10-22); and

a third queue (service queue, col. 3, line 50) coupled to the switch, the

third queue to hold task identifiers retrieved by the switch (col. 3, lines 50-53; col.

14, lines 10-12).

8.   Miro does not explicitly teach a port to receive <u>one or more data streams,</u>

<u>each data stream including one or more data frames</u>. However, AAPA teaches a

port to receive <u>one or more data streams, each data stream including one or</u>

<u>more data frames</u> (page 1 lines 16-21).

9.   It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teachings of Miro and AAPA because

AAPA's <u>one or more data streams, each data stream including one or more data</u>

<u>frames</u> would increase the flexibility and speed of Miro 's system by include all

the needed data streams to eliminate data flow bottlenecks or congestion.

10.   As to claim 2, Miro teaches a classifier communicatively coupled to the

port to assign a priority type to every data frame received (col. 3, lines 37-44; col. 13, lines 60-65).

11.   As to claim 6, Miro teaches a task router coupled to receive task identifiers from the task scheduler and the task identifiers in either the first or second queue (col. 14, lines 10-13).

12.   As to claims 7, 17 and 29, Miro teaches the task router is configured to monitor the first queue for an overflow condition and, if an overflow condition is detected, reassign data frame priority types to prevent overflow of the first queue (col. 3, line 63 – col. 4, line 4).

13.   As to claims 8-9, Miro teaches the switch is configured to retrieve task identifiers from the first and second queues in a fair and weighted manner according to priority types of the task identifiers (col. 3, lines 50-61; col. 7, lines 56-67; col. 14, lines 10-22.

14.   As to claim 10, Miro teaches the third queue is a shared execution queue from which one or more processing units retrieve task identifiers to process (col. 1, lines 42-45).

15.   As to claims 12,14, 20 and 25, Miro teaches the task priority level is

determined from the data frame type (col. 4, lines 50-66).

16.   As to claims 18, 23 and 30, Miro teaches placing the retrieved data frames

into an execution queue to be processed (col. 1, lines 42-45; col. 3, lines 50-53;

col. 14, lines 10-12).

17.   As to claim 26, Miro teaches each storage queue stores data frames of a

different task priority level than the other storage queues (col.4, lines 55-65).

18.   Claims 3-5 and 13 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Miro (U.S. Patent 5,220,653) in view of Applicant Admitted

Prior Art (AAPA), as applied to claims 1, 11, 19 and 24 above, and further in view

of Sherrod (U.S. Patent 4,642,756).

19.   As to claim 3, Miro does not explicitly teach look-up table store

communicatively coupled to the port, the look-up table store to store conversions

between priority types and data frame types. However, Sherrod teaches look-up

table store communicatively coupled to the port, the look-up table store to store

conversions between priority types and data frame types (col. 3, lines 7-12 and

lines 23-28).

20.   It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Miro·, AAPA and Sherrod because Sherrod's look-up table store to store conversions between priority types and data frame types would increase the flexibility of Miro and AAPA's

system by providing look-up table store to store conversions between priority types and data frame types to optimize the responsiveness of the computer to a set of interactive computer users.

21.   As to claims 4 and 13, Sherrod teaches the conversions between priority types and data frame types are pre-assigned (col. 3, lines7-12).

22.   As to claim 5, Sherrod teaches the conversions between priority types and data frame types are dynamically configured (col. 3, lines 23-28).

23.   Claims 15-16, 21-22, 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miro (U.S. Patent 5,220,653) in view of Applicant Admitted Prior Art (AAPA), as applied to claims 1, 11, 19 and 24 above, and further in view of Beaulieu et al. (U.S. Patent 6,182,120).

24.   As to claims 15, 21 and 27, Miro and AAPA do not explicitly teach each data frame type corresponds to particular processing time requirements.

However, Beauliew teaches each data frame type corresponds to particular

processing time requirements (col. 1, lines 50-51).

25.   It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teachings of Miro, AAPA and Beauliew

because Beauliew's <u>each data frame type corresponds to particular processing</u>

<u>time requirement</u> would increase the flexibility of Miro and AAPA's system by

provide <u>each data frame type corresponds to particular processing time</u>

<u>requirement</u> to optimize to use of one or more processors.

26.   As to claims 16, 22 and 28, Beauliew teaches according to the weighted

processing scheme, data frames of approximately equal total processing time

restrictions are retrieved from each storage queue in a task retrieval cycle (col. 3,

lines 11-25; col. 4, lines 30-52).

Conclusion

27.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Camquy Truong whose telephone number is (571) 272-

3773. The examiner can normally be reached on 8AM – 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-3756.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR of Public PAIP. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

have questions on access to the Private PAIP system, contact the Electronic Business

Center (EBC) at 866-217-9197(toll-free).

Camquy Truong

March 6, 2005

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